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MEETING SUMMARY
Forest Park/Berry Watershed Area Stakeholder Committee
April 28, 2011

Travis Avenue Baptist Church Welcome Center
6:30 – 8:30 p.m.

AGENDA

1. Background & Purpose
2. Study Objectives & Constraints
3. Economics of Forest Park/Berry Flooding
4. Transit Oriented Development Coordination
5. Detention Options
6. Discussion

City of Fort Worth Staff Members present:

- Greg Simmons, P.E., Assistant Director, Transportation & Public Works (TPW)
- Don McChesney, P.E., Engineering Manager, TPW Storm Water Management
- Steve Eubanks, P.E., Senior Professional Engineer, TPW Storm Water Management
- Linda Young, P.E., Senior Professional Engineer, TPW Storm Water Management
- Eric Fladager, Planning Manager
- Regis Andrez, Neighborhood Education Specialist
- Linda Sterne, Communications Officer, TPW Storm Water Management
- Ranjan Muttiah, P.E., Professional Engineer, TPW Storm Water Management

Watershed Consultants present:

- Burton Johnson, P. E., Michael Baker Jr. Corporation - Feasible Options Study Project Manager
- Pam Roach, President, Pam Roach Public Relations – Feasible Options Study Public Involvement Consultant
- Zubin Sukheswalla, PE, CFM, Project Manager, AECOM
- Terry M. Barr, P. E., CFM, Halff & Associates

Stakeholders present:

- Paula Traynham
- Rick Kubes
- Jim Johnson
- James Hawks
- Harold Leeman
- Paul Dennehy
- Judy Williams
- Linda Clark
- Mike Dellies
- Steve James
- Skip Schmidt
- Jennifer Retter

Stakeholders present represented the following:

- Forest Park/Berry property and business owners
- Neighborhood association leaders,
- Frisco Heights Neighborhood Association
- Paschal Neighborhood Association
- Ryan Place Neighborhood Association
- Berry Street Initiative Committee Members
- TCU representatives

Media Representatives

- TCU's "The 109" Newsletter

WELCOME BACKGROUND & PURPOSE OF MEETING

Greg Simmons, Assistant Director of Transportation & Public Works,

Mr. Simmons opened the meeting by polling attendees to determine how many had heard about the Feasible Options Study, or attended previous meetings. About half said they had heard very little. He proceeded with the following briefing of the background and purpose of the study:

1. **The Forest Park/Berry watershed's underground system is not designed to handle the current level of water.**
   - Severe flooding in 2004 led to a groundswell of activity that resulted in the establishment of a Storm Water Utility (SWU) in 2006. The SWU's fees fund the City's Storm Water Management Program.

2. **Storm Water Management's engineers and consultants have been studying this area for quite some time but have had difficulty finding a solution for a problem of this size in a fully developed area.**

- The challenge of this process is to identify ways to construct infrastructure to move flood water in an affordable manner that is not unacceptably disruptive to the community.

3. **Community engagement has been ongoing since September 2010**, **when SWM staff and consultants began working through the process with stakeholder groups.**
   - It is important to hear from those who know the pulse of the community to help find a solution that effectively deals with the problem, or dramatically improves it.

4. **There is no predetermined plan or hidden agenda.**
   - We're telling you what's on the table so we can work with you to develop a feasible solution. We also need your advice on how to engage other parts of the community that don't come to public meetings yet are affected by the problem and will be affected by the solution.

Mr. Simmons then turned the meeting over to Feasible Options Study project manager, Burton Johnson, P. E., of the Michael Baker Jr. Corporation.

CONSULTANT PRESENTATION

Burton Johnson, P.E. *Project Manager, Michael Baker Jr. Corp.*

Mr. Johnson opened by discussing the importance of hearing from the community regarding the impact of flooding in their neighborhoods. One data collection tool being used for this study is an online Community Survey, where property owners can provide invaluable details specific to their experiences. Despite outreach efforts, the response so far has been limited. Only 14 online surveys have been completed since the March 24, 2011 community meeting on this issue. This compared to hundreds of property owners who may have been impacted throughout the Forest Park/Berry watershed.

Community Survey outreach efforts have included:

- email blasts through the City's neighborhood education database;
- working directly with neighborhood association leaders to disseminate electronic flyers via email to promote the survey;
- submission of an online link to the survey from "The 109 Newsletter's" Twitter page and news stories,
- distribution of flyers (hard copy) at community and stakeholder meetings

Mr. Johnson asked for ideas from the group regarding additional ways to reach other impacted homeowners. Their suggestions were as follows:

- Churches
- Ask KTCU for a radio spot
- Ask Travis Avenue Baptist Church to announce the survey or to put it in their bulletin
- Ask St Stephen Presbyterian Church to announce the survey or to put it in their bulletin
- Ask Paschal High School to get the word out via their PR sources

Study Objectives & Constraints

Mr. Johnson began his presentation by explaining the Feasible Option Study's objectives and constraints:

Objectives

- Reduce flood damage
- Increase public safety
- Enhance the community (provide opportunities for open space, green parks,)
- Provide measures to improve quality of runoff where possible.

Constraints

- Project plans must be implementable
- Project plans must be acceptable to the community
- Must treat everyone fairly and with respect.
- Project must not increase flooding in other locations

Mr. Johnson said that for a solution to be feasible, it must be affordable, effective, and acceptable to the community – and the goal of the City is to identify a solution that provides the greatest possible balance of these criteria.

Economics of Forest Park/Berry Flooding

Current Level of Service

The current system capacity can only drain about 1 ½ inches of rain per hour (the equivalent of about a 2 yr. frequency event). If it rains more than 1 ½ inches, flooding and damages result.

- 2 inches of rain = approximately $7M in damages.
- 3 inches of rain = approximately $13.3M in damages.
- 4 inches of rain = approximately $17.9M in damages.

The majority of damages will occur as a result of 2"-3" storm events.

Flood Mitigation Measures

- increase the size of the pipes (conveyance), or
- increase storage (detention).

Ideas from Previous studies

- Pipe enlargements. **(Cost = $43M)**
- Tunnel plans

Detention

- Create surface or underground detention areas to hold runoff temporarily. Previous consultants estimated that the amount of storage volume needed would be the equivalent of filling the lower bowl of Amon G. Carter Stadium 5 to 6 times.

    - **Surface detention** (30 acres, about 150 lots) - To capture 3.8 inches of runoff the City would need a **detention basin** (a depressed surface area that holds water) that would occupy about 30 acres, the equivalent of the Paschal High School Campus (including football fields and school). There are no large vacant areas in the FPB neighborhood of this size and therefore implementing a detention area this large would require the City to acquire about 10 blocks of properties.

      Cost for this option = $53M

    - **Underground detention** - In order to reduce the area required for detention and minimize the amount of private properties that must be acquired, previous consultant studies explored the cost of underground detention.

      Cost for this option = $136M.

All recommended alternatives involved some degree of acquiring property and rights-of-way.

Alternative Detention Options

General Approach

- Economics indicate that a substantial amount of this problem could be addressed with a smaller solution. If we handle less than the 100 year storm, for example, we might solve 75% of the problem for 50% of the cost.
- Stormwater Park – Develop a number of small, neighborhood oriented “pocket” parks or “linear parks” which have depressed areas for detaining storm water while providing

landscaping, recreation and other some amenities. This may be more costly than large scale detention basins but it fits better into local neighborhoods.

- Detention associated with Transit Oriented Development (i.e. commuter rail stations and adjacent development)--Form-based Codes would be developed for this area which would allow re-development around new transit stations, including detention and related amenities. (See presentation)
- Detention in the Berry Street commercial area that is subject to flooding.

Transit Oriented Development

- Greenway Detention tied to the "T" Station project
- Opportunities for mixed-use corridors that provide storm water storage along with other uses such as pedestrian or bike trails, etc.

Reduced Detention (Accommodate 2.5"/hour instead of 3.8"/hour)

- This would address a substantial portion of expected damages.

- "Aggressive Detention**"** – Acquire land and maximize the depth of the detention. This is the most cost effective way of obtaining the amount of detention needed but it would rate low on acceptability.
  - 6 acres of detention needed – the equivalent of about 35 lots
  - Estimated cost = $10.5 million

- "Storm Water Park Detention**"** – green space corridors and sculpted basins, duplicating natural drainage features.
  - 12 acres of detention needed – the equivalent of about 70 lots
  - Estimated cost = $17.5 million

Mr. Johnson turned the meeting over to Mr. Eric Fladager who made a special presentation regarding transit oriented development coordination around the Berry Street Corridor to address flood prevention and control.

SPECIAL PRESENTATION:

Flood Prevention, Through Transit-Oriented Development

A special presentation was given by Eric Fladager, AICP, Comprehensive Planning Manager, City of Fort Worth Planning & Development Department, regarding a unique opportunity to implement flood control through planned Transit-Oriented Development (TOD) around the TCU/Berry commuter rail station.

The City of Fort Worth and its project partners obtained a grant from the North Central Texas Council of Governments to develop a detailed Transit-Oriented Development plan and implementing Form-Based Code around the TCU/Berry Station area. Partners include the private Berry Street Initiative group, TCU, and The T. The TCU/Berry Station will be developed as part of the new Tarrant Express (or TEX) commuter rail line from southwest Fort Worth, through downtown, to the north DFW Airport terminals.

Mr. Fladager said that the Planning & Development Department is engaged in long-range planning across the city, including the development and implementation of Urban Village plans (such as the Berry/University Urban Village Master Plan), which encourage pedestrian-friendly environments and economic development. Transit-Oriented Development (see slides 23 & 25) is being planned around the TCU/Berry commuter rail station to encourage mixed uses and new housing choices within a vibrant and walkable station area, somewhat similar to the Mockingbird Station area in Dallas.

The Form-Based Code created through this project will be based on -- and designed to implement -- a detailed development plan for the TCU/Berry Station area. A Form-Based Code is a specialized type of zoning that focuses on implementing a specific built environment within a designated area, rather than primarily regulating how property owners can use their land. The City's community-driven effort to create a detailed development plan for the TCU/Berry Station area presents a very unique opportunity to address stormwater management more holistically within the design of a future neighborhood surrounding the station. Based upon the outcome of the Stormwater Feasible Options Study and other engineering efforts, the Form-Based Code implementing the TCU/Berry Transit-Oriented Development plan can provided for properly sized and appropriately located stormwater detention/retention/conveyance areas that serve as valuable open space amenities -- or stormwater parks -- for the station area neighborhood.

Mr. Fladager said that flood detention areas don't have to be big concrete boxes. They can take the form of landscaped linear parks with bike and pedestrian trails that enhance the neighborhood. The City doesn't want to negatively impact stormwater management with TOD. Instead, the City wants to integrate stormwater management within the built environment around the rail station to help prevent flooding, while at the same time increasing the desirability of the surrounding neighborhoods.

A Town Hall Meeting is being planned for June 21, 2011 to bring everyone up to speed on what's happening on the Berry Street corridor.

Mr. Fladager returned the meeting to Mr. Johnson who resumed discussions with the group.

DISCUSSION: ACQUIRING PROPERTIES

Mr. Johnson stated that the City is very nervous about the idea of acquiring properties however the option is believed to be the most economic approach to addressing this flooding problem. He then asked stakeholders how they felt about this option. The following is a list of their responses:

- **Stakeholder Comment –**
  This is a question about values. Taking of homes is okay as long as you consider other places first.
  - Look at businesses first. Financial disruptions must be considered where families and the elderly are involved.

- **Stakeholder Comment –**
  There are also industrial areas east of Paschal that might be of consideration, before you go to homeowners.

- **Stakeholder Comment –**
  Being involved with the Berry Street Initiative, there are great opportunities, existing undeveloped areas with short term plans for them, where detention can be placed. This way you're not disrupting homes, creating eyesores, and worried about who will keep land up.

- **Stakeholder Comment -**
  Good amenity to attach rail station to neighborhood.

- **Stakeholder Comment** -
  Why don't you build underground detention where TCU is building its new orchestral Hall? Once it's constructed it will be too late to think about detention. This seems to be the least expensive way to approach it.

- **Stakeholder Comment** -
  Displaced people whose lots are being purchased should not be shafted.

- **Staff Comment (Don McChesney)** -
  At this point in the study we should be open to all options; at the end of the study, we will test our assumptions to make sure we develop the most feasible plan.

QUESTIONS & ANSWERS

1. *Question - When a flood event occurs, does the City collect data to measure how much water, how high it reached, and levels of property damage?*

   Staff Response – (Steve Eubanks)
   - Yes. We do the best we can with available staff and storm-water consultants. Where we can, we like to observe flooding problems as they occur. Often, however, flooding occurs at scattered locations within the City or during night time hours where direct observation of flooding is more difficult. In these situations, we assess the level of flooding based on after-the-fact observations of debris lines on buildings.

2. *Question - How is data collected? Is someone out there measuring high water marks to track floods over time so we can plan for damage?*

   Staff Response – (Steve Eubanks)
   - Data is collected every time there is a major storm. We also can use hydraulic models and historical radar data to establish flood levels. Where indirect flooding levels are estimated, ground observations are used to calibrate and validate calculated values.

3. *Question - What about flood insurance?*

   Staff Response – (Steve Eubanks)
   - Most people don't buy flood insurance because their homes are not located in the FEMA floodplain. The City of Fort Worth participates in the National Flood Insurance Program but, to utilize it, property owners must be located in a flood plain. Everyone can buy flood insurance, however.

4. *Question - Are railroads off limits?*

   Staff Response – (Steve Eubanks)
   - Generally, yes; it is unlikely that we could use railroad rights-of-way for detention. Often we have existing "detention" next to railroads due to historically undersized culverts under the tracks. It is difficult even to enlarge a pipe under a railroad, so we try to work around these situations where we can by creating detention in some location upstream of the railroad.

5. *Question - What is the potential impact to gas wells from flooding?*

Staff Response – (Steve Eubanks)

- The gas well companies make sure that the wells can withstand flood events.

6. *How does topography work relative to flooding?*

Staff Response – (Steve Eubanks)

- Drainage is dependent on topography. Flooding generally occurs in low lying areas that were subject to flooding before development occurred, but streets and other infrastructure can also create pockets of flooding in higher areas where none previously occurred.

7. *Question – How many properties do you want to take? Are developers going to purchase them?*

Consultant Response – (Burton Johnson)

- We don't want to take any. We need 30 acres. As developers begin to assemble land for the TOD, they may take care of the problem themselves. We are trying to give you a framework of what it will take to provide a solution. Surface detention is a good solution but we need your feedback. (See Surface Detention explained on page 6)

8. *Question – People are not being notified about the meetings or the community survey. How are you reaching out to people? Why isn't it on the City's main web page?*

Staff Response (Regis Andrez, Neighborhood Education)

- The Feasible Options Study's public Involvement consultant has been working with our Neighborhood Education Department to communicate with FPB stakeholders in the following ways:
  - Email blasts
  - "The 109" Newsletter
  - Staff Presentations at Neighborhood Association meetings
  - Neighborhood Association Email blasts